

Appl. No.: 09/809,213
Amdt. dated August 4, 2003
Reply to Office action of June 4, 2003

REMARKS/ARGUMENTS

Applicant received the Final Office Action dated June 4, 2003, in which the Examiner continued to reject claims 1-20 as anticipated by Morishima. Applicant traverses the rejections of claims 1-20 for the reasons stated in their previous response as well as the additional reasons provided below. Applicant also adds new claims 21-28. Applicant respectfully requests reconsideration and allowance of all pending claims.

Morishima is directed to an image display apparatus in which, as illustrated in Figures 3 and 4, an image 11 is divided into separate portions 14-1, 14-2, and 14-3 and provided to a plurality of LCDs 1-1, 1-2, and 1-3. The images from the plurality of LCDs are provided to a single eye of a person. The apparatus depicted in many of the Figures of Morishima illustrate the apparatus used to provide an image to a single eye. The Morishima patent prefaces the discussion of the apparatus as follows:

FIG. 3 illustrates a state wherein only the left eye portion of an observer 6 is observed from a position above the head of the observer 6, and does not illustrate the right eye portion. However, the apparatus is symmetrical about the center of the face of the observer 6.

Column 4, lines 11-16. This passage thus states that the apparatus being shown and described in the description is replicated for the right eye. As such, Morishima teaches dividing an image to a plurality of portions that are provided to the same eye. The other eye is presented with the same or similar compilation of images. This conclusion is further supported by the fact that the various embodiments depicted in the Morishima patent depict an image being provided to a single pupil referred to by reference numeral 7 in some figures and 81 in other figures, not different images provided to two pupils. See Morishima's Figures 5, 7, 10, 12, 13, 15, 17, 18, and 25.

The Examiner also made reference to Figure 28B in Morishima. Figure 28b shows two eyes of a person receiving visual input. As explained in the associated text of Morishima, the images provided to a person's eyes have an

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associated parallax angle. Column 17, lines 18-42. Morishima does not teach or suggest providing different images to a person's eyes.

Independent claim 1 requires, among other limitations, dividing image signal data into first and second portions, generating right and left display signals using the first and second portions, transmitting the right and left display signals to right and left displays, and displaying right and left images on the right and left displays. Claim 1 also requires the first and second portions to comprise first and second reduced data sets defining the entire image. As explained above, Morishima teaches dividing an input image into separate portions and providing the separate portions to displays associated with one eye. Morishima does not teach or even suggest dividing an input image into separate portions and providing the separate portions to different eyes. Morishima also does not teach or suggest generating right and left display signals using first and second portions of an image that comprise reduced data sets defining the image. At least for these reasons, claim 1 is neither anticipated by, nor rendered obvious over, Morishima. Claims 2-9 depend on or from claim 1 and are allowable at least for the same reason as claim 1.

Independent claim 10 comprises displaying a right image on a right display using a first portion of a source image signal, the first portion comprising a first reduced data set defining the entire image and displaying a left image on a left display using a second portion of the source image signal, the second portion of the source image signal differing from the first portion of the source image signal, the second portion comprising a second reduced data set defining the entire image. As explained above, Morishima does not teach or suggest displaying separate images to both eyes using different portions of a source image signal. Morishima also does not teach or suggest displaying separate images to both eyes using portions of a source image signal where the portions comprise reduced data sets defining the entire image. At least for these reasons, claim 10 is neither anticipated by, nor rendered obvious over, Morishima. Claims 11-15 depend on or from claim 10 and are allowable at least for the same reason as claim 10.

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Claim 16 is directed to an image display device that comprises, among other limitations, a controller arranged to utilize first and second portions of image signal data to generate right and left display signals where the first and second portions comprise first and second reduced data sets. Claim 16 also requires right and left displays that receive the right and left display signals, respectively. As explained previously, Morishima does not teach or even suggest this combination of limitations. Accordingly, claim 16 is neither anticipated by, nor rendered obvious over, Morishima. Claims 17-20 depend on or from claim 16 and are allowable at least for the same reason as claim 16.

Newly added method claim 21 requires generating first and second sets of pixels from an input image using different portions of the input image and providing the first and second sets of pixels to a left eye display and right eye display, respectively. Morishima neither teaches nor suggests such a combination of limitations.

Dependent claims 22-24 depend from claim 21 and thus are allowable for at least the same reason. Further, dependent claim 22 specifies that generating the first and second sets of pixels comprises selecting different rows and columns of the input image when generating the first set of pixels than when generating the second set of pixels. Dependent claim 23 specifies that different columns of the input image are selected when generating the first and second sets of pixels. Claim 24 depends on claim 23 and further specifies averaging pixels in adjacent rows. None of these limitations are taught or suggested by Morishima.

Claim 25 is an apparatus claim that comprises, among other limitations, a controller coupled to left and right eye displays, wherein the controller receives an input image and, from the input image, generates a left eye image to be shown on the left eye display and a right eye image to be shown on the right eye display. Further, the claimed controller generates the left and right eye images using portions of the input image, wherein the portion use to generate the left eye image differs from the portion used to generate the right eye image. Claim 25 is patentable over Morishima based on some or all of the reasons stated above.

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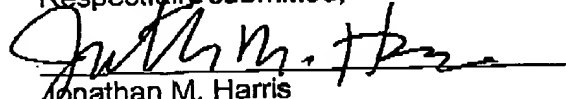
Claims 26-28 depend from claim 25 and thus are allowable at least for the same reasons as claim 25. Further, claim 26 requires the controller to select different columns of the input image when generating the left eye and right images. Claim 27 requires the controller to average pixels in adjacent rows and claim 28 requires the controller to select different rows and columns when generating the left and right eye images. None of these limitations are taught or suggested by Morishima.

In the course of the foregoing discussions, Applicant may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future.

If any fees or time extensions are inadvertently omitted or if any fees have been overpaid, please appropriately charge or credit those fees to Hewlett-Packard Company Deposit Account Number 08-2025 and enter any time extension(s) necessary to prevent this case from being abandoned.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



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